

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

FOR: APPARATUS AND METHOD FOR POWERING MULTIPLE
PERIPHERAL DEVICES FROM A COLOR-CODED CENTRAL POWER
SOURCE

REQUEST FOR REHEARING
UNDER 37 C.F.R. § 41.52

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I. REQUEST FOR RE-HEARING UNDER 37 C.F.R. § 41.52

This Request for Re-Hearing arises from the Decision on Appeal mailed March 24, 2011, Appeal No. 2010-02446. If granted, oral hearing is respectfully requested.

II. ISSUES TO BE REVIEWED

- A. The harmful consequences of the confusion over the interpretation of the Dwight reference.
- B. The previously briefed but overlooked improper withdrawal of the Notice of Allowance under MPEP §706.04.
- C. The failure to follow and improper use of the MPEP.

III. THE ORIGIN OF THE DWIGHT MISINTERPRETATION

As the Board is well aware, this file has a long, rich, and interesting history dating back over a decade. Rather than laboriously re-hashing each twist and turn in that history, Appellant has herein attempted to distill the salient events into a manageable summary.

The primary reference for rejecting all of the claims under 35 U.S.C. §103(a) is a design patent issued to Dwight (US Des. 401,220). Secondary references were cited in support of the obviousness rejection and are discussed later in these remarks. Appellant contends that the Dwight reference has been misinterpreted from its introduction, and its use here is inappropriate for a variety of reasons.

The introduction of the Dwight reference first appears in the November 5, 2001 Office Action. As a design patent with several deficiencies as proper cited art for rejection of the claims

in the present application (which will be discussed in depth below), Dwight was not introduced by itself, but was combined with promotional material of its Assignee, ACCO, through its subsidiary Kensington. These included a product review by Leonard Wiener, entitled "SmarterStrip," U.S. News & World Report, published May 5, 1997, and as an anonymous article, entitled "Designer Surge Protectors Debut from Kensington," *Twice*, published April 7, 1997, which discloses "... color coded sockets and matching identification rings to be placed on the electrical device that is plugged into it." [Emphasis added.] (November 5, 2001, Office Action, para. 9).

These publications were properly withdrawn, together with Dwight as not truly prior art by the Office Action dated May 6, 2002. However, those articles are useful here for insight into how and why the misinterpretation of the Dwight reference began. The inclusion of these improperly cited and misleading marketing documents led to assumptions on the part of the Examiner (and, embarrassingly, Appellant's attorneys) that Dwight included attributes presented in the marketing materials that were not actually present in the patent (particularly, e.g. references to color). This initial combination of the Dwight reference and the wrongfully introduced marketing materials created the initial confusion as to the actual teachings of the Dwight patent. And this misinterpretation has persisted until a few days before the hearing in this matter on March 10, 2011.

IV. THE CLAIMS WERE ALLOWED IN 2004

From 2001 through March of 2004, this application was handled by multiple patent examiners and supervisors. The claims have been rejected and amended on several occasions, but on March 26, 2004 Appellant filed an amendment adding currently pending claims 49-62.

After filing the March 26, 2004 Response, as no further action was received from the USPTO on the case, the Appellant's Attorney telephoned the new examiner, Examiner DeBeradinis, on September 1, 2004. Telephonic Interviews were conducted on September 2, 2004, and September 7, 2004, during which further amendment to the claims was proposed in the belief that such amendment would place the application in condition for allowance. A Supplemental Amendment Response to Office Action was filed on September 22, 2004, wherein Claims 49, 56, and 58-61 were amended, but not substantially. Another Telephonic Interview was conducted on October 21, 2004, during which Examiner DeBeradinis indicated allowability of the claims over the cited references. A telephone conference was conducted with Examiner DeBeradinis on October 28, 2004, during which Examiner DeBeradinis indicated that a Notice of Allowance would issue. On November 3, 2004, another telephone conference was held with Examiner DeBeradinis, during which he indicated that the Supplemental Amendment required further revision only as to informalities as also shown in the October 28, 2004, Notice of Non-Compliant Amendment. On November 12, 2004, a Revised Supplemental Amendment Response to Office Action was filed to comply with the October 28, 2004, Notice of Non-Compliant Amendment. Claims 49-62 were amended on November 12, 2004, in the Revised Supplemental Response to Office Action, based on the understanding that they were to be allowed thereafter.

Having neither received a Notice of Allowance nor a Notice of Allowability by January 2005, the Appellant's Attorney consulted the USPTO online PAIR System on January 24, 2005. The PTO electronic record indicated that a Notice of Allowability had indeed issued on November 15, 2004, but was never received by the Appellant's Attorney.

However, on January 25, 2005, the electronic record of the November 15, 2004, Notice of Allowability was deleted from the USPTO PAIR System (See Evidence Appendix Exhibit B). Instead, on January 31, 2005, the Appellant's Attorney received yet another Office Action dated January 25, 2005, wherein Claims 49-62 were rejected, citing a primary reference, Dwight (US Des. 401,220) and a secondary reference Barna (US 5,775,935), as grounds for rejection of the claims on the basis of 35 U.S.C. §103(a). Both of these references were previously cited and withdrawn by Examiner Polk in the May 6, 2002, non-final Office Action, over three (3) years before.

A Telephonic Interview was conducted on February 9, 2005, by Mr. F. David LaKiviere for the purpose of pointing-out to Examiner DeBeradinis that both Dwight and Barna had already been previously cited and withdrawn by Examiner Polk, to which Examiner DeBeradinis replied that he was unaware of that part in the file history. He further stated that he had decided to conduct an independent search of the prior art, without acknowledging the previous allowability of the claims, which resulted in Dwight and Barna being reasserted in the then pending Office Action. The Final Rejection was mailed June 14, 2005.

A subsequent Telephonic Interview with Examiner DeBeradinis was conducted by Patent Attorney Don R. Mollick on July 26, 2005, at which time claim amendments under 37 CFR §116 were suggested and rejected. Examiner DeBeradinis stated that the present application

could not possibly be allowed without another rejection since according to the Examiner allowing the application would give Appellant an *"unfair advantage over its competitors."*

IV. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 49 addresses an AC electrical power distribution system with a plurality of substantially identical AC power distribution outlets for connecting AC electrical power to a plurality of devices, where the housing also has a plurality of colored areas (each colored area different from the other) for selectively identifying each respective outlet. The subject matter of independent claim 49 is found at page 3 of the specification lines 12 through 24 and pages 5 line 23-page 6 line 16 and figure 2 and 3 of the drawings numbers 20N and 23 (a, b, c, d, e...n).

Independent claim 58 describes a method for preventing confusion in users of a multiple outlet power strip having several identical outlets for providing power to a plurality of devices, comprising the steps of: assigning a separate and distinct colored area proximate to each outlet for selectively identifying each outlet of said power strip, assigning each colored area a different color from any other such colored area; and providing colored indicia corresponding to the colors of said colored areas for identifying devices assigned to each colored area. The subject matter of independent claim 58 is found at page 3 line 29 through page 4 line 6 of the specification and figures 1-8 of the drawings.

VI. MISINTERPRETATION OF DWIGHT HAS CAUSED CONFUSION

The June, 14, 2005 Office Action (Final Office Action 7), as well as the Decision on Appeal that affirms it, states that Dwight discloses "a power strip housing having a plurality of

colored areas (different hatching indicating different colors).” While this is not an exact recitation of the claims, it does show that the misinterpretation of Dwight persists. Appellant contends that the Dwight reference fails to anticipate this aspect of Appellant’s invention.

Appellant concedes that a cursory review of Dwight may lead to the conclusion that the cross hatching on the drawings indicate color. Indeed, some of the cross hatching seems to utilize the USPTO drawing guidelines, MPEP §1503.02 and §608.02 to indicate color. However, a careful inspection of the drawings reveals previously unrecognized but clear evidence that color is not an element of the patent.

First, according to MPEP 15.05.041, “In any drawing lined for color, the following descriptive statement *must* be inserted in the specification (the specific colors may be identified for clarity)”, (emphasis added):

--The drawing is lined for color.---

The decision on appeal references this issue and includes the curious statements that absence of the statement is “harmless because the record is silent as to there being consequent confusion”. Applicant strongly disagrees with this holding.

As discussed above, confusion regarding the scope of Dwight has been the primary reason for the long and tortuous prosecution history of this case since June 14, 2005. Confusion regarding the scope of Dwight remains the primary reason Appellant has had to incur the substantial effort and expense of this prolonged prosecution. Appellant contends that there has been, and continues to be substantial confusion, which has caused significant harm to Appellant, including the continuing rejection of the claims.

VII. MPEP HAS FORCE OF LAW

In its decision, the Board found that “MPEP §1503.02 V... does not have the force of law or regulation...”. And it is true that the Forward to the MPEP includes that statement. However, as pointed out by the BPAI in *Ex parte Yamaguchi*, 61 USPQ2d 1043 (BPAI 2001): “[I]t is well settled that the rules of the PTO have the force and effect of law unless they are inconsistent with statutory provisions, *In re Rubinfeld*, 270 F.2d 391, 395, 123 USPQ 210, 214 (CCPA 1959), cert. denied, 362 U.S. 903 (1960)”.

Further, 35 U.S.C. §2(b) (2006) states that (“The [PTO]...may establish regulations, not inconsistent with law, which...shall govern the conduct of proceedings in the Office [and] shall be made in accordance with [informal rulemaking under 35 U.S.C. §553].”); *Lacavera v. Dudas*, 441 F.3d 1380, 1383 (Fed. Cir. 2006) (“The PTO has broad authority to govern the conduct of proceedings before it...”). *Gerritsen v. Shirai*, 979 F.2d 1524, 1527 (Fed. Cir. 1992). Because of this authority, the Federal Circuit often has deferred to the PTO’s procedural regulations - i.e., procedures for prosecuting (applying for) patents. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1425 (Fed. Cir. 1988). This includes such issues as the form of the patent application and registration requirements for practicing before the PTO.

The court in *Merck & Co. V. Kessler*, 80 F.3d 1543, 1549-50 (Fed. Cir 1996) states in clear terms that the PTO is authorized to issue rules that pertain to the procedure of the PTO. This complements the Federal Circuit’s view that, in contrast to the PTO’s lack of authority over substantive issues, the PTO has plenary authority over its procedures. See *Gerritsen*, *supra*.

In the case at bar, there should be no disagreement that the PTO rules governing how patent applicants are to indicate colors in black and white drawings, are procedural, not substantive. And as such, absent statutory or case law to the contrary, the PTO has full authority

to create and enforce its own rules governing procedural rules, and these rules are given great deference by the courts.

Further, there have been no enacted statutory provisions inconsistent with this MPEP section. In fact, many cases have used this MPEP provision to make key factual and legal decisions.

For instance, in *Sun Hill Industries, Inc. v. Easter Unlimited, Inc.*, 48 F.3d 1193, the U.S. Court of Appeals for the Federal Circuit uses this doctrine in holding that “In its opinion on the patent issues, the trial court found that the design patent recites “a shiny, stuffed bag which has jack-o-lantern faces on either side.” *Id.* at 1035. The patent, the trial court observed, does not show other features of the GIANT STUFF-A-PUMPKIN. [T]he patent never mentions color or size or material--despite standard ways to include such information, see Manual of Patent Examining Procedures [§ 608.02 (5th ed. latest rev. 1994)]....*Id.* at 1035-36.

In a situation similar to that of our patent examiner, “The trial court committed legal error by relying on unclaimed features of Sun Hill’s commercial embodiment. The trial court recognized that “the patent never mentions color or size or material.” *Sun Hill*, 831 F.Supp. at 1035.

The courts regularly attribute the force of law to the MPEP. In *Calphalon Corporation v. Meyer Corporation* No. Civ. S-05-971 WBS DAD U.S. District Court for the Eastern District of California, 2006, the Court held that “The Manual of Patent Examining Procedure specifies how a patentee can indicate that a special surface treatment is used on an invention, and there is no indication that any sort of special surface treatment was used on both segments of the handle here. See *id.* §1503.02(IV)”.

In *Schnadig Corporation v. Collezione Europa U.S.A.*, No. 01 C 1697 U.S. District Court for the Northern District of Illinois, Eastern Division, 2002, the Court held “Defendant argues that the surface line drawings of the base represent marble or a marble –like finish. Defendant first points out that the inventor did not use either of the symbols for wood found in the MPEP. Plaintiff conceded at the Markman hearing that the inventor did not use either of the symbols for wood found in the MPEP. Plaintiff also failed to identify the line surface drawings as a symbol for wood within the patent. Nothing in the patent or the prosecution history indicates that the line surface drawings represent wood.”

These cases unequivocally show that it is reversible error to read unclaimed features into a patent. Here, the Dwight design patent fails to include 1) the required statement indicating the inclusion of color and 2) the proper use of required graphical symbols - yet disclosure of color is being attributed to it.

Other than the cross-hatching, discussed below, there is nothing in the file history of Dwight indicating that color is an element of the patent. In fact, the file history of Dwight as well as the issued patent are completely *silent* as to color as a feature of the design. Appellant asserts that the failure of Dwight to comply with the MPEP rules regarding color designs is unambiguous evidence that there was never any intent to claim color, let alone to teach or suggest color for use as prior art.

Finally, Dwight failed to file a petition under 37 CFR 1.84(a) (2) in accordance with MPEP §15.05.041 to explain the distinction between the two sockets having similar, but distinct, horizontal line markings. MPEP §15.05.041 states, inter alia: “[I]n any drawing lined for color, the following statement must be inserted in the specification (the specific colors may be identified for clarity):

---The drawing is lined for color---

However, some designs disclosed in informal color photographs/drawings cannot be depicted in black and white drawings lined for color. For example, a design may include multiple shades of a single color which cannot be accurately represented by the single symbol for a specific color. Or, the color may be a shade other than the true primary or secondary color as represented by the drafting symbols and lining the drawing with one of the drafting symbols would not be an exact representation of the design as originally disclosed. In these situations, Appellant may file a petition to accept formal drawings or color photographs under 37 CFR 1.84(a)(2).¹⁷ See Exhibit A.

Thus, if Dwight intended to show different shades of the color blue, then approval of a petition for distinguishing such shades would have been required in accordance with MPEP §15.05.041. No petition of any sort was filed to explain the distinction between the two distinct horizontal lined graphical symbols appears in the file history of Dwight.

VIII. DWIGHT'S GRAPHIC SYMBOLS DO NOT DISCLOSE COLOR FEATURES

With respect to the hatching on the drawings, two of the six hatchings are nearly identical. In particular, in accordance with MPEP §608.02, horizontal lines are to be used to indicate the color blue. There are two such horizontal hatchings in Dwight, where one of them has greater separation between each of the horizontal lines. There is no indication in Dwight what that difference is supposed to represent, and there is no such distinction defined in any section of the MPEP. One could speculate as to what Dwight was intending to portray with these unidentified symbols, but it is clear error to read any meaning into the patent where the features

of the drawings are not clearly disclosed or defined, and nothing in the file history otherwise clarifies the inventor's intent.

MPEP §608.02 provides more than enough choices to show a different color for each of the six receptacles of Dwight, *if that was Dwight's intent*. Instead, Dwight chose to include two similar but distinct hatching symbols (both symbols show horizontal lines, but with different spacing characteristics), having no color difference in accordance with MPEP requirements. These symbols were not included to show color differences. If Dwight intended that each of the hatching symbols were there to show a different color, then all of the symbols would indicate a different color from the MPEP color symbol guide. Hence, the hatching symbols disclose surface treatments, not color.

As the Board is well aware, patents that disclose color utilize the specific MPEP rules that govern this issue. Attached as Exhibit B are just a few examples that do just that. In contrast to Dwight, these patents comply with the strict MPEP rules governing color, and produce no confusion that the black and white drawings include color elements. In any event, when a patent does not clearly and unambiguously disclose a particular element, it is error for the Board to engage in speculation or to impute disclosure without further evidence. But, as in Leonor, "... this seems to be a clear case in which the examiner and the board were unable to resist the temptation to read into the prior art teachings of the invention in issue". See Application of Manuel F. Leonor, Patent Appeal No. 7912 before the United States Court of Customs and Patent Appeals, quoting Graham V. Deere Co., 383 U.S.1, 36, 86 S.Ct 684, 703, 15 L. Ed 2d 545 (1966).

Dwight is nothing more than a design for a power strip configuration featuring non-functional contours and surface treatment which includes stippling and perhaps grooves or other

marking around the receptacles. Therefore, since Dwight actually failed to disclose a plurality of colored areas on a power strip for identifying individual receptacles/sockets, it fails to render the present invention obvious. The addition of Barna, Liner and Crane cannot save Dwight as a relevant reference for obviousness under 35 U.S.C. §103(a), since none of them are drawn to power strip designs.

If the reasoning of the Examiner, affirmed by the BPAL, was sound and taken to its logical conclusion, the patents provided in Exhibit B hereto among many others would never have issued. In particular, Barthelmess, US 6,995,525 (Light display with color and clear lights), which discloses in column 3 "In one embodiment, the three outlets ... are colored coded by color different from the first color."... "In another embodiment, at least one of the plurality of outlets 102 may be color coded corresponding to the color of the light string the outlet 102 is adapted to receive. For example, an outlet 102 adapted to receive a string of red lights may be colored red, while an outlet 102 adapted to receive a string of green lights may be colored green." Further, Barthelmess claims "A light display power box according to claim 1, wherein said first and second outlets are color coded".

Dwight, having merely non-functional, *non-colored* ornamented rings, even in view of Barna, having merely a pattern-colored, removable alignment strip over *non-identical* ports, do not teach, motivate, nor suggest the present invention which teaches functional fixed color-coding of substantially identical outlets in a plug strip for providing faster, superior visual and mental recognition. Appellant urgently contends that the present case is "... a clear case in which the examiner and the board were unable to resist the temptation to read into the prior art teachings of the invention in issue". See Application of Manuel F. Leonor, Patent Appeal No.

7912 before the United States Court of Customs and Patent Appeals, quoting *Graham V. Deere Co.*, 383 U.S. 1, 36, 86 S.Ct 684, 703, 15 L. Ed.2d 545 (1966).

Appellants believe that to penalize them for relying on all of the provisions of the MPEP is contrary to the fundamental principles of equity and fairness. This is especially true in this case where the Board is apparently using the MPEP rules to argue both sides of the same issue (i.e. that Dwight complies with the rule pertaining to color symbols MPEP 608.02, and is therefore allowable prior art, while at the same time arguing that the failure to follow the other applicable MPEP rule regarding the required statement under MPEP 15.05.041 was harmless error).

IX. IT WAS IMPROPER TO WITHDRAW NOTICE OF ALLOWANCE UNDER MPEP §706.04.

On page 26 of Appellant's corrected Appeal Brief filed March 9, 2006, which is incorporated by reference as if fully stated herein, Appellant began its argument that withdrawal of the Notice of Allowance was improper. The Board did not rule on that issue in its Decision on Appeal.

MPEP §706.04 addresses the rejection of previously allowed claims and provides:

A claim noted as allowable shall thereafter be rejected only after the proposed rejection has been submitted to the primary examiner for consideration of all the facts and approval of the proposed action. Great care should be exercised in authorizing such a rejection. See *Ex parte Grier*, 1923 C.D. 27, 309 O.G. 223 (Comm'r Pat. 1923); *Ex parte Hay*, 1909 C.D. 18, 139 O.G. 197 (Comm'r Pat. 1909).

Full faith and credit should be given to the search and action of a previous Examiner unless there is a clear error in the previous action or knowledge of other prior art. In general, an examiner should not take an entirely new approach or attempt to reorient the point of view of a previous examiner, or make a new search in the mere hope of finding something. *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 126 F. Supp. 2d 69, 139, 57 USPQ2d 1449, 1499-50 (D. Mass. 2001).

As discussed, *supra*, Primary Examiner DeBeradinis indicated that the pending claims were allowable during the October 21, 2004, Telephonic Interview. During the October 28, 2004, Telephonic Interview, he further represented that a Notice of Allowance would issue. The USPTO online PAIR System status printout of January 24, 2005, indicated that a Notice of Allowability issued on November 15, 2004, but was never received by the Appellant's Attorney.

However, on January 25, 2005, i.e., one (1) day later, the electronic record of the November 15, 2004, Notice of Allowability was mysteriously deleted from the USPTO PAIR System (See Evidence Appendix Exhibit B); and, instead, on January 31, 2005, the Appellant's Attorney received yet another Office Action dated January 25, 2004, wherein Claims 49-62 were rejected, citing Dwight and Barna as grounds for rejection of the claims on the basis of 35 U.S.C. §103(a), both of which were previously cited and withdrawn by Examiner Polk in the May 6, 2002, non-final Office Action, nearly two (2) years before, and after repeated indications of allowability of the present application.

MPEP §706.04 states, "Great care should be exercised in authorizing such a rejection." Particularly on point is that MPEP §706.04 also provides: "Full faith and credit should be given to the search and action of a previous examiner unless there is a clear error in the previous action

or knowledge of other prior art. In general, an examiner should not take an entirely new approach or attempt to reorient the point of view of a previous examiner, or make a new search in the mere hope of finding something.” The Appellant respectfully submits that the Examiner did not exercise the requisite level of care, i.e., “great care,” in rejecting the previously allowed claims in the January 25, 2004 (and subsequent) Office Actions.

Reiterating, a Telephonic Interview was conducted on February 9, 2005, for the purpose of pointing-out to Primary Examiner DeBeradinis that both Dwight and Barna had already been previously cited and implicitly withdrawn by Examiner Polk. The Examiner conceded that he was unaware of that part in the file history. He further conceded that he had decided to conduct an independent search of the prior art, without even acknowledging the previously allowed claims, thereby resulting in Dwight and Barna being reasserted in the outstanding Office Action on his mistaken belief that these references were being newly cited, and thereby returning full circle to the examination conducted by Examiner Polk three (3) years prior. The Examiner stated that he felt uncomfortable with allowing any claims involving “color-coding” and that he was certain that he would find “something” with an independent search. In other words, without any indication of clear error or independent knowledge, Examiner DeBeradinis summarily dismissed and ignored the findings of Examiner Polk in violation of MPEP §706.04.

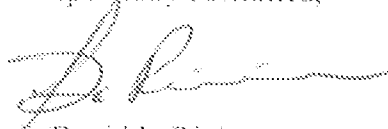
Claims 49, 52, 56-62 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Dwight in view of Barna. However, the record shows that Examiner Polk withdrew these references in her Office Action dated May 6, 2002. Thus, these references had already been considered with respect to substantially the same claims as being reviewed here. In fact, Appellant believes Examiner Polk correctly withdrew Dwight because she recognized that it does not disclose color for identifying individual sockets on a power strip.

X. CONCLUSION

Appellant understands and concedes that the misinterpretation by the Examiners of the Dwight reference could have, and should have been detected by Appellant at an earlier stage of this process. However, Appellant also believes that Examiner Polk recognized the shortcomings of the Dwight reference as prior art after mistakenly asserting it, and Primary Examiner DeBeradinis should have recognized those shortcomings, especially before reasserting in June of 2005.

However, Appellant is now asking the Board to review this issue with a fresh perspective and in light of the facts and law discussed above. From the extent of the file history alone, the importance of this patent application to the Appellant cannot be overstated, and Appellant is humbly putting its trust and faith in the hands of the Board to make a fair and honest ruling in this matter. Appellant believes that pending Claims 49-62 are in allowable form, and favorable action is accordingly solicited.

Respectfully submitted,



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EXHIBIT A



US00D606151S

(12) United States Design Patent
Barbis et al.**(10) Patent No.: US D606,151 S****(45) Date of Patent: ** *Dec. 15, 2009****(54) SHARK LIFE VEST****(76) Inventors:** Richard A. Barbis, 151 W. 7th Ave.,
Suite 405, Eugene, OR (US) 97401;
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Eugene, OR (US) 97404**(*) Notice:** This patent is subject to a terminal disclaimer.**(**) Term:** 14 Years**(21) Appl. No.:** 29/312,029**(22) Filed:** Sep. 26, 2008**(51) LOC (9) CL** 29-02**(52) U.S. Cl.** D21/805**(58) Field of Classification Search** D21/804,
D21/805; D29/100, 101.1, 101.4; 2/456,
2/458, 467, 468; 441/88, 89, 106, 108, 111,
441/114-117

See application file for complete search history.

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* cited by examiner

Primary Examiner—Janice E Seeger*Assistant Examiner*—Zenia I Bennett**(74) Attorney, Agent, or Firm**—Robert E. Howard**(57) CLAIM**

The ornamental design for a shark life vest, as shown and described.

DESCRIPTION

FIG. 1 is a right side view of the shark life vest of the present invention, the left side view being a mirror image thereof.

FIG. 2 is a front view thereof.

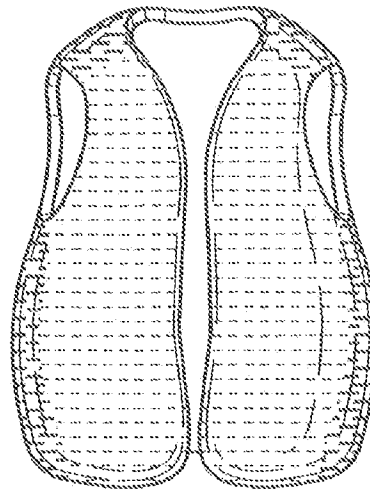
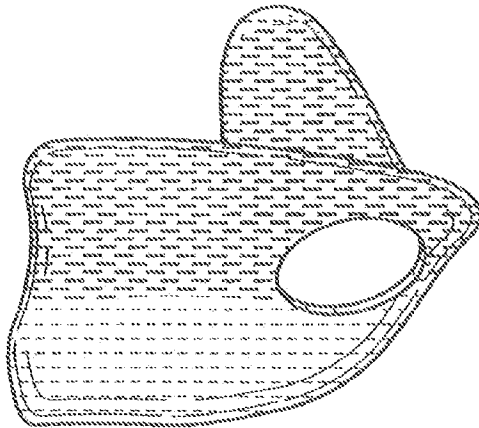
FIG. 3 is a back view thereof.

FIG. 4 is a top view thereof; and

FIG. 5 is a bottom view thereof.

The drawing is lined for color.

The dash marking shown in the drawings represent a pattern simulating two tones of the same color.

1 Claim, 1 Drawing Sheet



US00D558018S

(12) **United States Design Patent** (10) Patent No.: **US D558,018 S**
McRoberts et al. (45) Date of Patent: **** Dec. 25, 2007**

(54) **RECIPROCATING SAW**

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(*) Term: **14 Years**

(21) Appl. No.: **29/255,594**

(22) Filed: **Mar. 9, 2006**

(51) **LOC (8) Cl.** **08-03**

(52) **U.S. Cl.** **D8/64**

(59) **Field of Classification Search** **D8/69,**
D8/68, 67, 66, 65, 64, 62, 61; 30/92, 394,
30/393, 392, 377, 376, 371; 74/50, 49; 173/217,
173/216; 83/699.21; 446/145

See application file for complete search history.

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(74) *Attorney, Agent, or Firm*—Harniss, Dickey & Pierce,
 P.L.C.

(57) **CLAIM**

The ornamental design for a reciprocating saw as shown and described.

DESCRIPTION

FIG. 1 is a perspective view of the reciprocating saw of the present disclosure;

FIG. 2 is a left side elevation view of the reciprocating saw of FIG. 1;

FIG. 3 is a right side elevation view of the reciprocating saw of FIG. 1;

FIG. 4 is a top plan view of the reciprocating saw of FIG. 1;

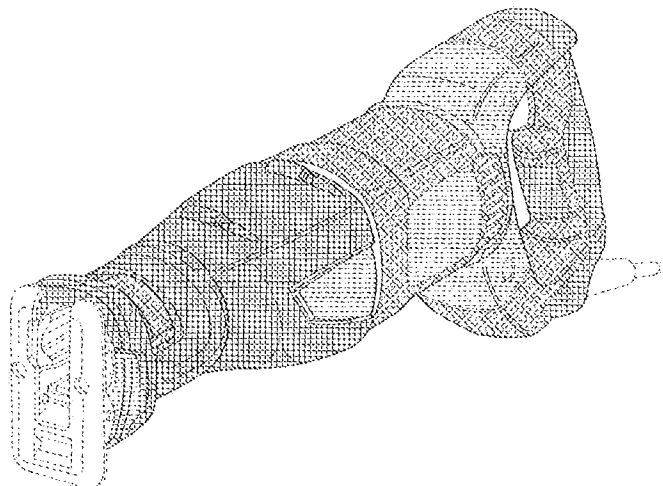
FIG. 5 is a bottom plan view of the reciprocating saw of FIG. 1;

FIG. 6 is a front elevation view of the reciprocating saw of FIG. 1; and,

FIG. 7 is a rear elevation view of the reciprocating saw of FIG. 1.

The drawing is lined for color. The broken line oblique cross-hatching is understood to be orange. The orthogonal cross-hatching is understood to be black. The parallel dashed lines are understood to be silver. The broken lines shown in the drawings form no part of the claimed design.

1 Claim, 5 Drawing Sheets





US00D567120S

(12) **United States Design Patent** (10) Patent No.: **US D567,120 S**
Merchant (45) Date of Patent: **** Apr. 22, 2008**

(54) TEMPERATURE INDICATING STRIP

Primary Examiner—Ainoine D Davis

(75) Inventor: Berkeley T. Merchant, Santa Fe, NM
(US)(74) Attorney, Agent, or Firm—Schweitzer Cornman Gross
& Bondell LLP(73) Assignee: Upsite Technologies, Inc., Santa Fe,
NM (US)

(57) CLAIM

(*) Term: 14 Years

The ornamental design for a temperature indicating strip, as
shown and described.

(21) Appl. No.: 29/282,856

(22) Filed: Jul. 31, 2007

DESCRIPTION

(51) LOC (8) CL. 10-04

(52) U.S. CL. D10/57

(53) Field of Classification Search D10/57;
73/356, 358; 116/14 R, 114 V, 114 S, 114 W,
116/114 AM, 114 AP, 114 X; 374/150, 162,
374/E1.019, E11.022, E13.002; 600/549

See application file for complete search history.

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FIG. 1 is a front elevation view of the temperature indicating
strip of the present invention;FIG. 2 is a front elevation view of a second embodiment of
the temperature indicating strip of the present invention;FIG. 3 is a front elevation view of a third embodiment of the
temperature indicating strip of the present invention;FIG. 4 is a front elevation view of a fourth embodiment of
the temperature indicating strip of the present invention;
and,FIG. 5 is a front elevation view of a fifth embodiment of the
temperature indicating strip of the present invention.The drawing is lined for color. The broken lines are intended
to show environmental structure and form no part of the
claimed design. The top, bottom, sides and back form no part
of the claimed design.

1 Claim, 2 Drawing Sheets





US00D602510S

(12) **United States Design Patent**
Harpaz

(10) Patent No.:

US D602,510 S

(45) Date of Patent:

*** **Oct. 20, 2009**(54) **CUTTING INSERT**(74) *Attorney, Agent, or Firm*—Womble Carlyle(75) Inventor: **Jacob Harpaz, Kfir Vradim (IL)**

(57)

CLAIM(73) Assignee: **Iscar Ltd., Tefen (IL)**

The ornamental design for a cutting insert, as shown and described.

(**) Term: **14 Years**(21) Appl. No.: **29/283,767**(22) Filed: **Aug. 21, 2007**(51) LOC (9) Cl. **15-09**(52) U.S. Cl. **D15/139**(58) Field of Classification Search **D15/138,****D15/139, 140; 407/35, 42, 112-119**

See application file for complete search history.

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Primary Examiner—Sandra Snapp*Assistant Examiner*—Patricia Palasik**DESCRIPTION**

FIG. 1 is a perspective view of a surface color pattern for a cutting insert showing my new design. The mesh lines indicate that: (a) there is a gold colored band which extends around the cutting insert along the cutting insert's side walls; and (b) in the vertical direction, the gold colored band extends along a medial portion of the side walls. The upper and lower portions of the cutting insert's side walls, on either side of the gold colored bands are black.

FIG. 2 is a first side view of a surface color pattern for a cutting insert, the other side views being the same; and,

FIG. 3 is a top view of the cutting insert, showing its footprint. No claim is being made to the appearance of the top or bottom surfaces.

The drawing is lined for color.

The broken lines in the drawings depict unclaimed environmental subject matter.

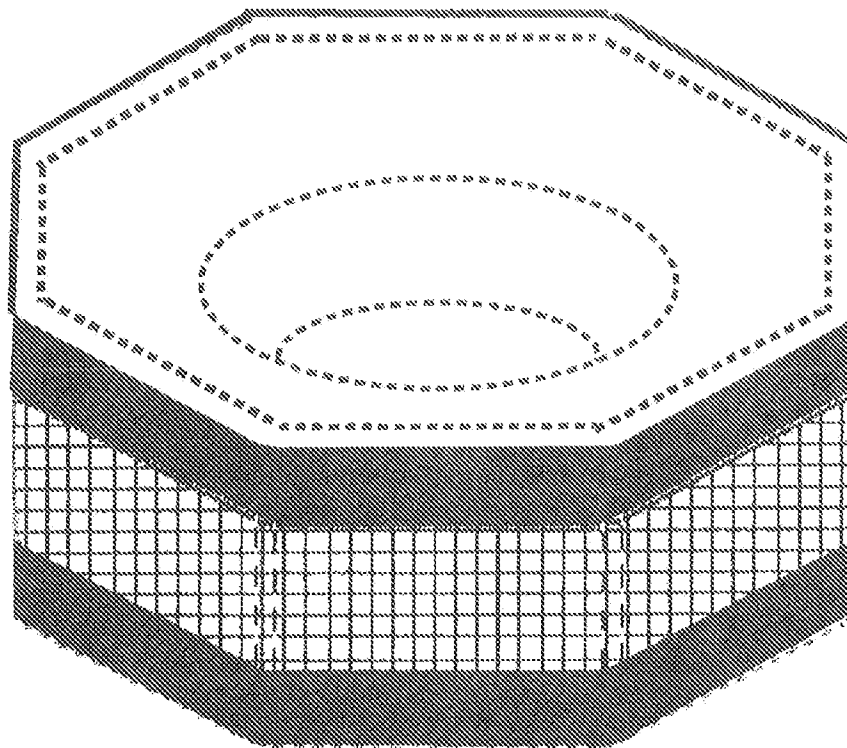
1 Claim, 2 Drawing Sheets

EXHIBIT B



US006995525B2

(12) **United States Patent**
Barthelmess

(10) Patent No.: **US 6,995,525 B2**
 (45) Date of Patent: **Feb. 7, 2006**

(54) **LIGHT DISPLAY WITH COLOR AND CLEAR LIGHTS**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 41 days

(21) Appl. No.: 10/705,968

(22) Filed: Nov. 13, 2003

(65) Prior Publication Data

US 2005/0104533 A1 May 19, 2005

(51) Int. Cl.
H05B 37/00 (2006/01)

(52) U.S. Cl. 315/323, 315/316, 315/312,
 315/152; 362/800, 362/806

(58) Field of Classification Search ... 315/152-154,
 315/140, 185 S, 200 A, 312-314, 320, 362/11,
 362/800-808

See application file for complete search history.

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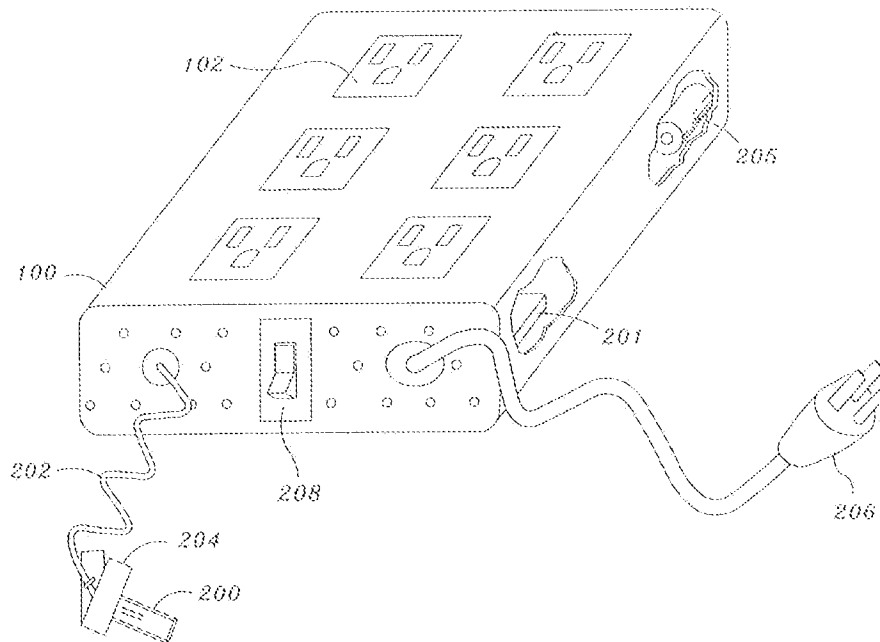
Primary Examiner—Tzyet Thi Vo

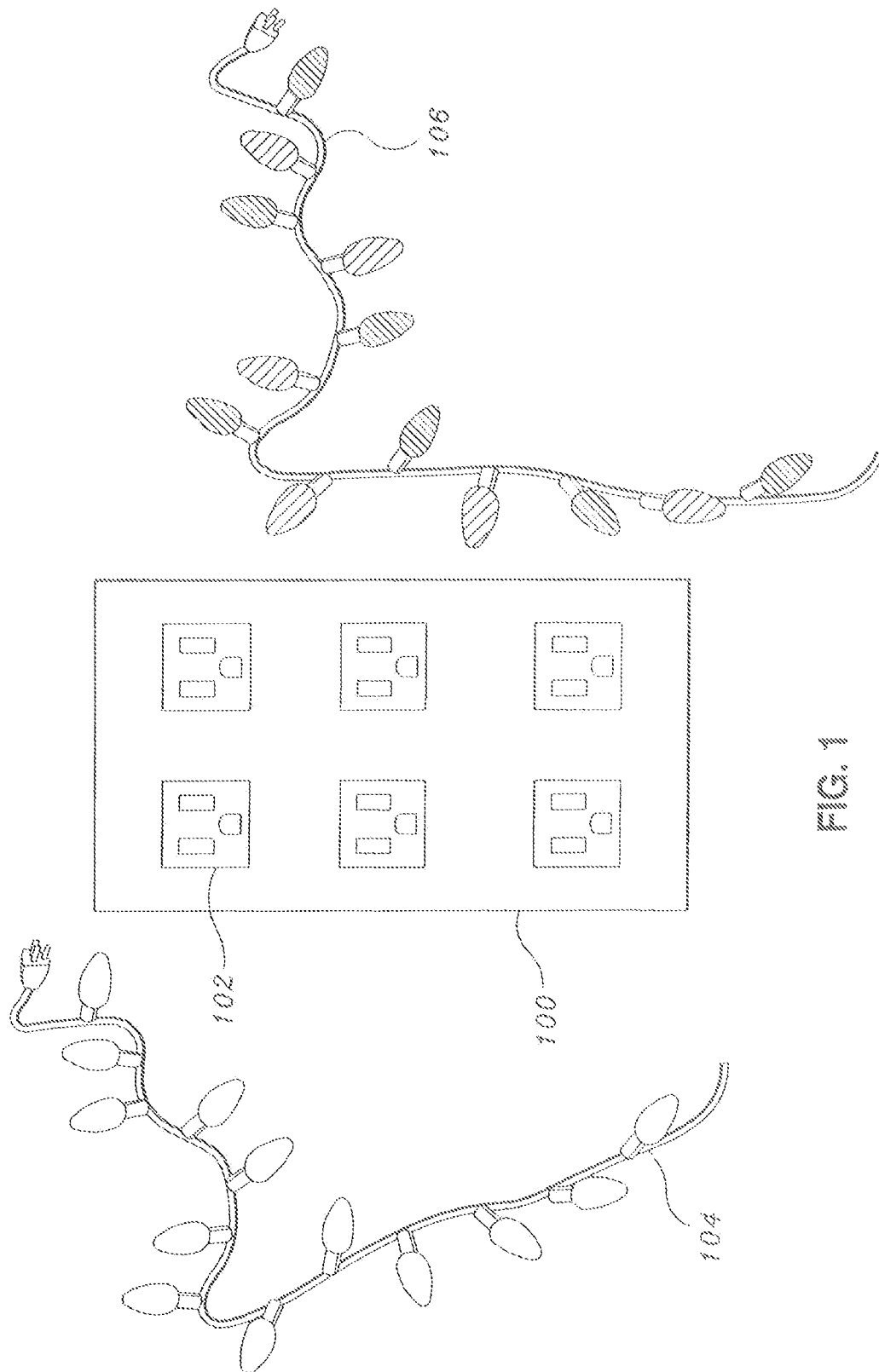
(74) Attorney, Agent, or Firm—McDermott Will & Emery, LLP

(57) ABSTRACT

A light display power box receives a string of clear and a string of colored lights thereby displaying clear and colored lights simultaneously to form selected light display patterns. The light display power box includes a plurality of outlets for receiving at least one string of clear lights and at least one string of colored lights. Additionally, the light display power box includes electronic circuitry including a microprocessor programmed to receive, process, and use received command signals to program selected light patterns. In one embodiment, a remote control transmitter transmits wireless command signals associated with selected light patterns to a sensor unit housed within or in proximity to the light display power box.

15 Claims, 4 Drawing Sheets





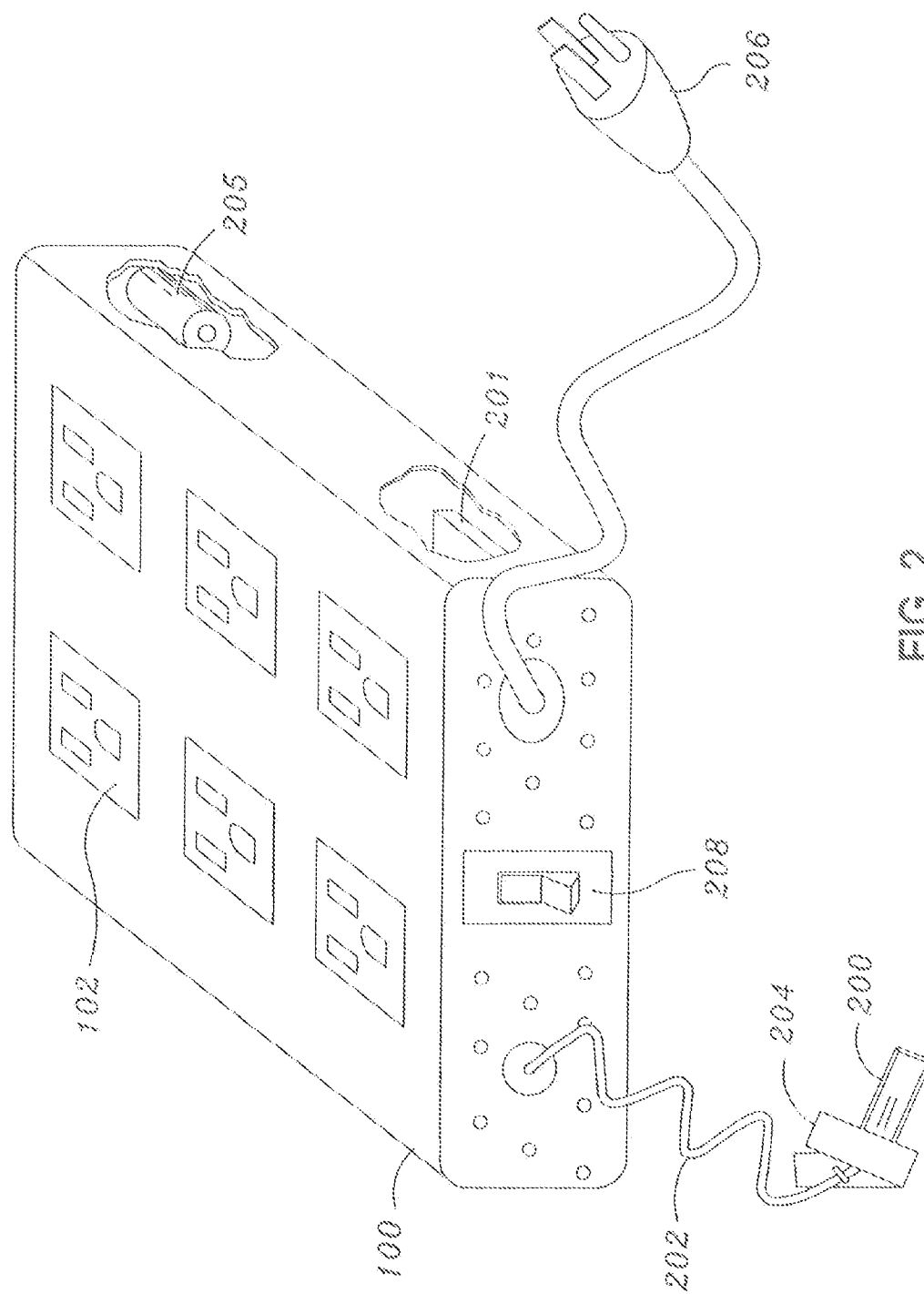
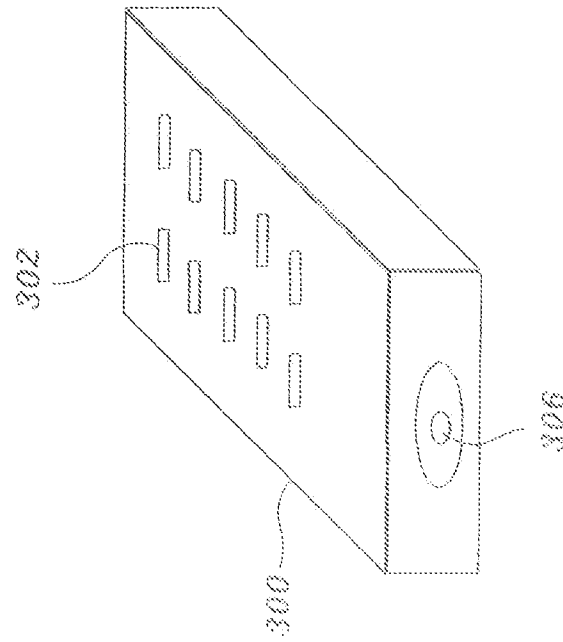
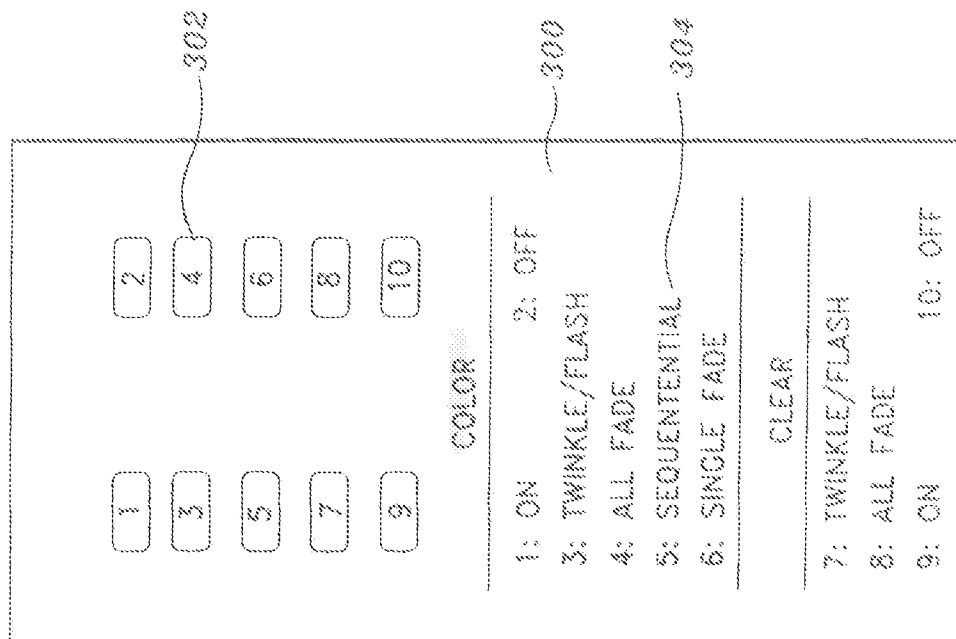


FIG. 2



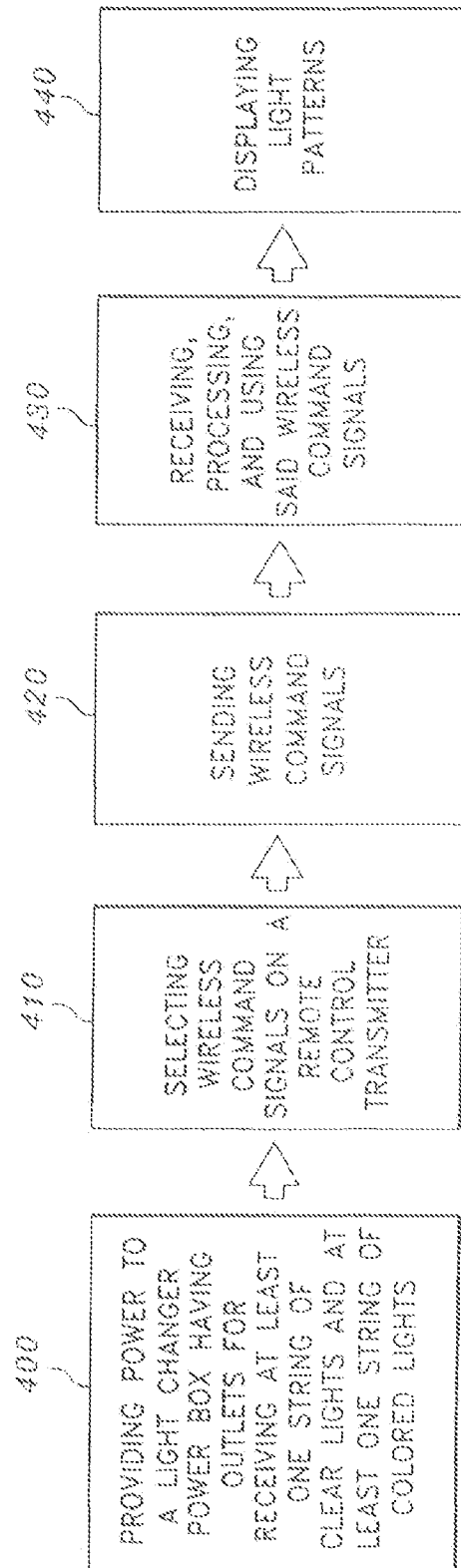


FIG. 4

LIGHT DISPLAY WITH COLOR AND CLEAR LIGHTS

FIELD OF THE INVENTION

This invention relates to light displays having a plurality of light strings. More specifically, the invention relates to a remote-controlled light display having both clear light strings and colored light strings.

BACKGROUND OF THE INVENTION

Light display mechanisms typically possess a plurality of light strings and most often are used for decorative purposes, such as for holiday and festival ornamentation. The lights in such light strings are generally positioned in series and made up of lights that are all the same color or different colors. Additionally, a given light string may be of a color different than the color of other light strings in the light display. The lights in the light display may also exhibit different patterns of display. For example, the brightness of the lights may be adjusted, the lights may be set to blink on and off, and/or the lights may fade or move from an on position to an off position in a manner so that they appear to be moving or traveling along a path.

The light displays known in the art include AC-powered displays that have an integrated control unit and control panel to control the lighting pattern of various colored light strings included in the light display. Additionally, the known art includes light displays having colored light strings which are controllable by a hand-held, remote controller such as that described in U.S. Pat. No. 6,424,096 ("096") to Lowe, et al. The light display of the '096 patent, as well as other known art, is limited in that the display only provides for a display of colored lights.

Accordingly, there exists a need in the art for a light display that is capable of displaying at least one string of clear lights and at least one string of colored lights. There is a further need in the art for the display features of the clear light strings and the colored light strings in the light display to be controlled from a location remote to the light display.

SUMMARY OF THE INVENTION

In one embodiment, the present invention provides a light display power box having a plurality of outlets which are adapted to receive at least one string of clear lights and at least one string of colored lights, a sensor unit to receive command signals, electronic circuitry including a microprocessor which is programmed to receive, process, and use the command signals to cause the string of colored lights and the string of clear lights to illuminate according to a selected light display pattern; and a power plug to connect to a power source for providing power to the light display power box.

In another embodiment, the invention provides a light display power box having six outlets, where three of the outlets are adapted to receive at least one string of clear lights, and three of the outlets are adapted to receive at least one string of colored lights, where at least one of the string of colored lights includes lights of at least two different colors; a sensor unit adapted to receive command signals, electronic circuitry including a microprocessor which is programmed to receive, process, and use the command signals to cause the string of colored lights and the string of clear lights to illuminate according to a selected light display pattern; and a power plug to connect to a power source for providing power to the light display power box.

In yet another embodiment, the present invention includes a light display system having a plurality of outlets which are adapted to receive a string of clear lights and a string of colored lights; a remote control transmitter for generating wireless command signals; a sensor unit to receive the wireless command signals; electronic circuitry including a microprocessor which is programmed to receive, process, and use the wireless command signals to cause the string of colored lights and the string of clear lights to illuminate according to a selected light display pattern, and a power plug to connect to an AC power source in order to provide power to the light display system.

In yet another embodiment, the present invention provides a method of displaying clear lights and colored lights including the steps of: providing power to a light display power box having a series of outlets for receiving at least one string of clear lights and at least one string of colored lights; selecting command signals on a transmitter which correspond to a light display pattern to be displayed by at least one string of clear lights and at least one string of colored lights; sending the command signals from the transmitter to a sensor unit which is electrically coupled to the light display power box; receiving, processing, and using the command signals through a microprocessor housed within the light display power box, thereby displaying selected light display patterns that correspond to the command signals.

In yet another embodiment, the present invention includes a method of displaying clear lights and colored lights having the steps of: providing power to a light display power box having a series of outlets for receiving at least one string of clear lights and at least one string of colored lights; selecting wireless command signals on a remote control transmitter which correspond to a display pattern to be displayed by the at least one string of clear lights and the at least one string of colored lights; sending the wireless command signals from the remote control transmitter to a sensor unit electrically coupled to the light display power box; receiving, processing, and using the wireless command signals through a microprocessor housed within the light display power box, thereby displaying selected light display patterns that correspond to the wireless command signals. The objects, features and advantages of the present invention will be apparent from the following detailed descriptions of the invention in conjunction with reference to the following drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top elevational view of one aspect of the light display power box of the present invention.

FIG. 2 is a side perspective view of the light display power box of the present invention including a view of a sensor unit, a on/off switch and a power plug attached thereto.

FIG. 3a is a top elevational view of the remote control transmitter of the present invention, while FIG. 3b provides a side perspective view of the remote control transmitter of the present invention displaying the window on the remote control transmitter through which wireless command signals pass.

FIG. 4 is a process flow diagram of a method for displaying lights clear and colored lights in a light display.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

FIG. 1 presents a top elevational view of the light display power box 100 depicting the plurality of outlets 102. As shown, in one aspect of the invention, the light display power box 100 has six outlets 102, although one in the art would appreciate that any number of a plurality of outlets 102 could be included in the present invention. At least one of the outlets 102 in the light display power box 100 is able to receive at least one string of clear lights 104, while at least one of the outlets 102 is able to receive at least one string of colored lights 106. It is also provided that multiple strings of the same colored lights may be plugged into the same outlet 102. The string of clear lights 104 and the string of colored lights 106, in a preferred embodiment, are of the type commonly known in the art where the lights in the respective strings are electronically configured in series. In one aspect of the invention, at least one of the plurality of outlets 102 may receive at least one of a plurality of colored light strings different in color than at least one other of the plurality of strings of colored lights 106 received by another of the plurality of outlets 102 in the light display power box 100. A non-limiting example of such would be where one outlet 102 in the light display power box 100 is adapted to receive blue light strings while another outlet 102 in the light display power box 100 is adapted to receive red light strings. Additionally, in a preferred embodiment, the light display power box 100 includes six outlets 102 where three outlets 102 are adapted to receive at least one string of clear lights 104 and three outlets 102 are adapted to receive at least one string of colored lights 106. Each string of colored lights 106 may include lights of at least two colors or more. In one embodiment, the three outlets adapted to receive at least one string of clear lights 104 are color coded by a first color and the three outlets adapted to receive at least one string of colored lights 106 are color coded by a color different from the first color. It would be appreciated in the art that such multi-colored light strings are those which include at least two different colors of lights in the same string. It would also be appreciated by one skilled in the art that any number of outlets 102 may be provided to receive at least one string of clear lights 104 and at least one string of colored lights 106.

Notably, in a preferred embodiment of the invention, at least one string of clear lights 104 and at least one string of colored lights 106 are connected to the outlets 102 in the light display power box 100 at the same time. It is however possible that only at least one string of clear lights 104 or at least one string of colored lights 106 is connected to the light display power box 100 at any given time. One skilled in the art will appreciate that any color, combination and/or number of light strings could be used in addition to or instead of the aforementioned.

In another embodiment, at least one of the plurality of outlets 102 may be color coded corresponding to the color of the light string the outlet 102 is adapted to receive. For example, an outlet 102 adapted to receive a string of red lights may be colored red, while an outlet 102 adapted to receive a string of green lights may be colored green. It is additionally provided that an outlet 102 adapted to receive a string of clear lights 104 may be white or without color. In a further embodiment, three outlets 102 adapted to receive colored lights may be without color, or the same color as the light display power box 100, while the outlets 102 adapted to receive a string of clear lights may be white, clear, or another color designating the outlet(s) 102 as adaptable to receiving a string of clear lights 104. One skilled in the art

would recognize that a wide range of colors and configurations may be used to differentiate the outlet(s) 102 adapted to receive a string of clear lights 104 as opposed to those adapted to receive a string of colored lights 104.

FIG. 2 is a side perspective view of the light display power box 100 depicted in FIG. 1. In one aspect, wireless command signals are received by a sensor unit 200 which is attached to the light display power box 100. In a preferred aspect, the sensor unit 200 is an infrared sensor unit 200 capable of receiving infrared wireless command signals from a remote control transmitter 300 (see FIGS. 3a and 3b). Alternatively, the sensor unit 200 may be adapted to receive radio frequency signals. The sensor unit 200, in an additional aspect of the invention, may be directly attached to the light display power box 100 or attached to the light display power box 100 by a length of wiring 202. A further aspect provides an attachment apparatus 204, such as but not limited to, a loop, a clip, a fastener, a hook or a tie. The attachment apparatus 204 may be affixed to the sensor unit 200 or to the length of wiring 202 in proximity to the sensor unit 200 so that the sensor unit may be positioned or attached at a desired location. This latter embodiment is of particular use when convenient access to the sensor unit 200 and control of the light display is needed, such as when the light display is being used to decorate a Christmas tree or other object.

In one embodiment of the present invention, the sensor unit 200 communicates the wireless command signals it receives to a microprocessor 201 housed within the light display power box 100. Microprocessor 201, along with other electronic circuitry in the light display power box 100, receives, processes and acts on the wireless command signals to determine a selected light display pattern to be displayed by the at least one string of clear lights 104 and the at least one string of colored lights 106 connected to the outlets 102 on the light display power box 100.

In one aspect of the invention, a power plug 206 may be adapted to a power source to provide power to the light display power box 100. In a further aspect, the power plug 206 is an AC power plug that provides AC power to the light display power box 100 using an AC receptacle power source. In another embodiment, DC power source 203 (illustrated as a battery) is used to power the light display power box 100. In one aspect of the invention, the light display power box 100 also includes an on/off switch 208. This on/off switch 208 allows the light display power box 100 to switch from a state where the light display power box 100 receives power to a state where the light display power box 100 is turned off.

In an alternative aspect of the invention, the light display power box 100 includes a transmitter that may be coupled to or integrated with the light display power box 100. The transmitter may include a series of control buttons or a type of selection keys commonly used in the art to allow for the selection of command signals that correspond to the light display patterns displayed by the at least one string of clear lights 104 and the at least one string of colored lights 106 received by the outlets 102 in the light display power box 100.

FIGS. 3a and 3b depict the remote control transmitter 300 of the present invention. In FIG. 3a, a top elevational view of the remote control transmitter is presented. A plurality of control buttons 302 and corresponding explanatory notations 304 may be present on the surface of the remote control transmitter 300. The plurality of control buttons 302 along with the corresponding explanatory notations 304 allow for the selection of specific wireless command signals to control the light display patterns provided by the at least one string of clear lights 104 and the at least one string of colored lights

106 connected to the light display power box 100. These control buttons 302, in addition to controlling the light patterns, may also control the on/off state of the light display power box 100. As noted, one skilled in the art would recognize that the control buttons 302 could be any type of selection keys or strokes recognized in the art. Additionally, the specific explanatory notations 304 shown in FIG. 3a are for illustrative purposes, and one skilled in the art would recognize that those depicted are a small sampling of possible explanatory notations 304 and are not meant to be limiting.

As noted, the remote control transmitter 300 allows for the selection of specific wireless command signals corresponding to the light display patterns to be displayed by the string of clear lights 104 and the string of colored lights 106 accommodated by the light display power box 100. It is also possible that, based on a user's selection, wireless command signals correspond to the light display patterns of only the string of clear lights 104 or only the string of colored lights 106.

FIG. 3b is a side perspective view of the remote control transmitter 300. The remote control transmitter 300, as shown by the embodiment presented, includes a window 306 through which the command signals pass to the sensor unit 200. In this aspect, the command signals are wireless command signals. For example, the remote control transmitter 300 may transmit a radio frequency and the sensor unit 200 may be adapted to receive the radio frequency, such as a radio frequency of a range of approximately 200 to 400 MHz. The microprocessor in the light display power box 100 then receives, processes and uses the wireless command signals to activate the light display patterns selected by the user.

The light display patterns capable of being processed and displayed by the present invention are of a wide variety. For example, various embodiments of the present invention include, but are not limited to, light display patterns that: alter the brightness of at least one of the string of clear lights 104 and the string of colored lights 106; fade the brightness of at least one of the string of clear lights 104 and the string of colored lights 106; blink at least one of the string of clear lights 104 and the string of colored lights 106; change at least one of the string of clear lights 104 and the string of colored lights 106 from a lighted state to a dark state at random intervals thereby producing a random pattern of illumination; change at least one of the string of clear lights 104 and the string of colored lights 106 from a lighted state to a dark state, at sequential intervals thereby producing a traveling affect light pattern. The present invention also provides for embodiments in which at least two, at least three, or all of the aforementioned light display patterns are displayed simultaneously.

FIG. 4 is a process flow diagram of a method of displaying clear and colored lights through a light display power box 100. As shown in step 400, power is provided to a light display power box 100 having a series of outlets 102 for receiving at least one string of clear lights 104 and at least one string of colored lights 106. In step 410, wireless command signals on a remote control transmitter 300 are selected where the wireless command signals correspond to light display patterns to be displayed by at least one string of clear lights 104 and at least one string of colored lights 106. Next, step 420 provides for sending the wireless command signals from the remote control transmitter 300 to the sensor unit 200 which is coupled to the light display power box 100. A step of receiving, processing, and using the wireless command signals through the microprocessor

which is housed within the light display power box 100 and programmed to process the wireless command signals received by the sensor unit 200 is included in step 430. In step 440, light display patterns corresponding to the wireless command signals on at least one string of clear lights 104 and at least one string of colored lights 106 connected to the light display power box 100 are activated.

In an additional embodiment, the method of displaying clear lights and colored lights may include a step of connecting at least one of string of colored lights 106 which is different in color from at least one other string of colored lights 106 connected to an outlet 102 in the light display power box 102. A step of receiving at least one of string of colored lights 106 having lights of at least two different colors in the string of colored lights 106 is also provided. Another embodiment of the present invention includes a step of altering the brightness of at least one of the string of clear lights 104 and the string of colored lights 106. In an even further embodiment, the step of altering the brightness includes an additional step of fading the brightness of at least one of the string of clear lights 104 and the string of colored lights 106 from light to dark.

Additional, non-limiting aspects of the method of displaying clear lights and colored lights may include further steps. For example, a step of choosing wireless command signals to cause at least one of the string of clear lights 104 and at least one of the string of colored lights 106 to blink, may be included. Furthermore, a step of choosing wireless command signals to cause a random pattern of illumination by causing at least one of the string of clear lights 104 and at least one of the string of colored lights 106 to change from a lighted state to a dark state at random intervals. Additionally, a step of choosing wireless command signals to cause a traveling affect light pattern by causing at least one of the string of clear lights 104 and at least one of the string of colored lights 106 to change from a lighted state to a dark state at sequential intervals may be included. Also provided are further steps of activating at least two, activating at least three, or activating all of the following light display patterns: altering the brightness of at least one of the string of clear lights 104 and at least one of the string of colored lights 106; blinking at least one of said string of clear lights 102 and at least one of said string of colored lights 106, providing a random pattern of illumination by causing at least one of the string of clear lights 104 and at least one of the string of colored lights 106 to change from a lighted state to a dark state at random intervals; and providing a traveling affect light pattern by causing at least one of the string of clear lights 104 and at least one of the string of colored lights 106 to change from a lighted state to a dark state at sequential intervals.

While the present invention has been described in terms of the preferred embodiments, other variations which are within the scope of the invention as defined in the claims will be apparent to those skilled in the art.

What is claimed is:

1. A light display power box, comprising:

first and second outlets, said first outlet receiving at least one of a first type of lights, said second outlet receiving at least one of a second type of lights, wherein said first and second outlets are coded corresponding to light types;

a microprocessor, said microprocessor effectuating a selected light display pattern for the first type of lights and the second type of lights, either together or separately, based upon command signals, and

- a sensor unit further comprising an attachment apparatus, said sensor unit affixed to the light display power box via a length of wire and positioned to remotely receive wireless command signals.
2. A light display power box according to claim 1, wherein said first and second outlets are color coded.
3. The light display power box according to claim 1, further comprising:
- a transmitter, said transmitter further comprising a plurality of control buttons for selecting the command signals for transmission to said sensor unit, the command signals selectively establishing defined light display patterns for said first type of lights and said second type of lights.
4. The light display power box according to claim 1, wherein said first type of lights are clear lights, and said second type of lights are colored lights.
5. The light display power box according to claim 1 wherein the second type of lights are multi-colored lights.
6. The light display power box according to claim 1 wherein the second type of lights are red, blue and/or green lights.
7. The light display power box according to claim 1, wherein the command signals cause said first type of lights and/or said second type of lights to blink.
8. The light display power box according to claim 1 wherein the command signals cause said first type of lights and/or said second type of lights to change from a lighted state to a dark state at random intervals thereby producing a random pattern of illumination.
9. The light display power box according to claim 1, wherein the command signals cause said first type of lights and/or said second type of lights to change from a lighted state to a dark state at sequential intervals thereby producing a traveling affect light pattern.

10. The light display power box according to claim 1, wherein said sensor unit is an infrared sensor unit.
11. The light display power box according to claim 1, wherein said sensor unit is a radio frequency sensor unit.
12. The light display power box according to claim 1, further comprising a third outlet, said third outlet receiving at least one of said first type of lights or said second type of lights.
13. The light display power box according to claim 12, further comprising fourth through sixth outlets, said fourth through sixth outlets receiving at least one of said first type of lights and/or said second type of lights.
14. A light display power box system, comprising:
- a holiday decoration, and
 - a light display power box, further comprising:
 - first and second outlets, said first outlet receiving at least one of a first type of lights, said second outlet receiving at least one of a second type of lights, wherein said first and second outlets are coded corresponding to light type;
 - a microprocessor, said microprocessor effectuating a selected light display pattern for the first type of lights and the second type of lights, either together or separately, based upon command signals; and
 - a sensor unit further comprising an attachment apparatus, said sensor unit affixed to the light display power box via a length of wire and positioned on said holiday decoration to remotely receive wireless command signals.
15. The light display power box system according to claim 14, wherein the holiday decoration is a Christmas tree.



U5006984146B1

(12) **United States Patent**
Boudreau

(10) Patent No.: **US 6,984,146 B1**
(45) Date of Patent: **Jan. 10, 2006**

(54) **POWER CONNECTION ASSEMBLY WITH
FLUORESCENT MARKINGS**

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(US) 04260

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 207 days

(21) Appl. No.: 10/436,693

(22) Filed: May 13, 2003

(51) Int. Cl.
H01R 3/00 (2006.01)

(52) U.S. Cl. 439/488

(58) Field of Classification Search 439/488,
439/491, 679, 678

See application file for complete search history

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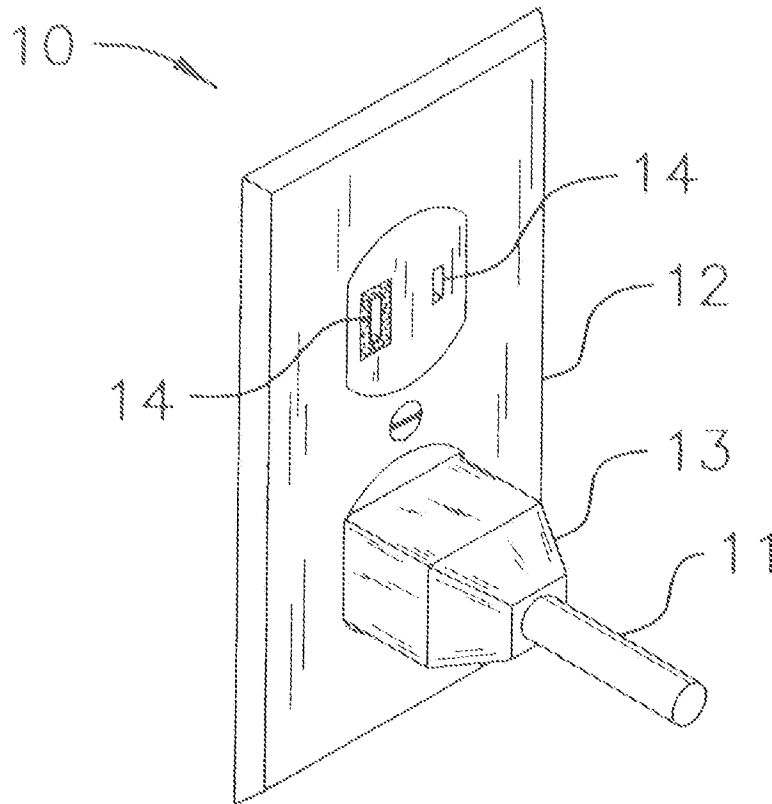
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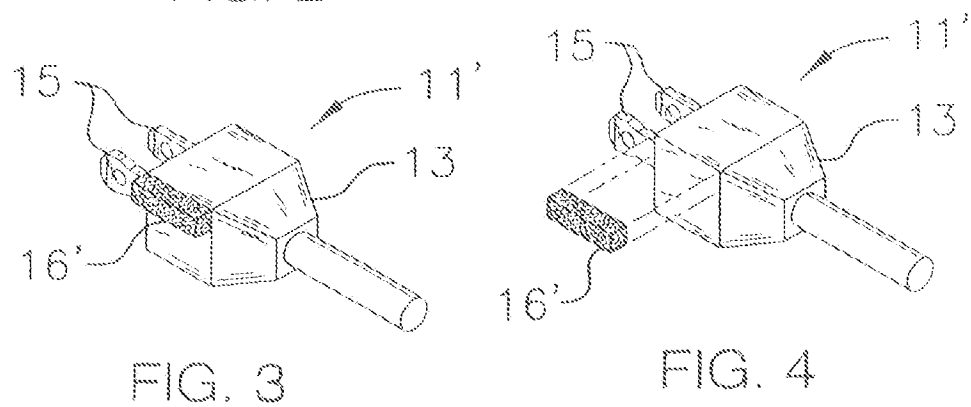
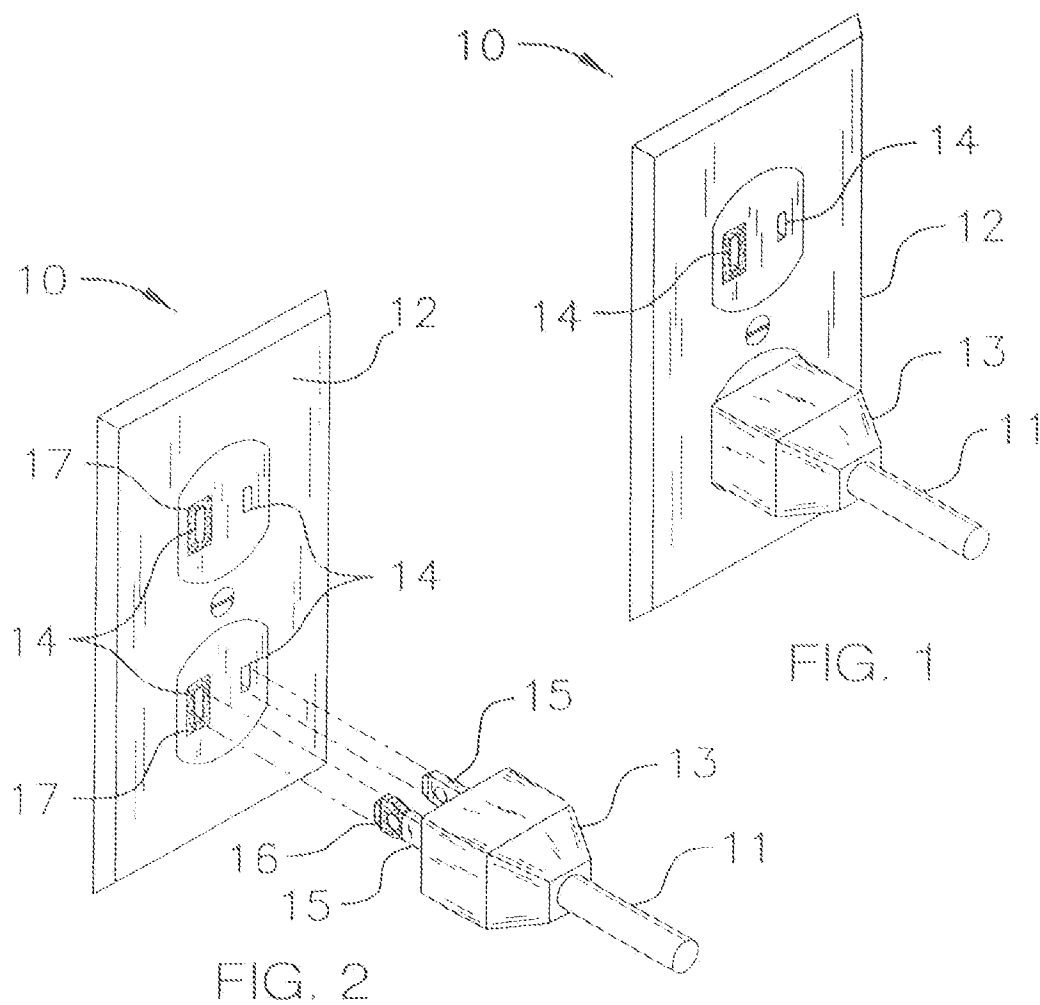
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(57) **ABSTRACT**

A power connector assembly includes a power cord having a connector end portion integral therewith. The connector end portion includes a plurality of spaced apart prongs extending outwardly therefrom. The connector end portion also has at least one illuminating portion. The assembly also includes a power outlet having a plurality of slots for receiving the plurality of prongs respectively. At least one of the plurality of slots has an illuminating portion for identifying the at least one slot. The power cord is insertable into the power outlet by guiding the at least one illuminating connector end portion toward the at least one illuminating slot portion. The at least one illuminating connector end portion may be disposed adjacent to the plurality of prongs. Alternately, the at least one illuminating connector end portion may be attached to at least one of the plurality of prongs.

18 Claims, 1 Drawing Sheet





POWER CONNECTION ASSEMBLY WITH
FLUORESCENT MARKINGSCROSS REFERENCE TO RELATED
APPLICATIONS

Not Applicable

STATEMENT REGARDING FEDERALLY
SPONSORED RESEARCH OR DEVELOPMENT

Not Applicable

REFERENCE TO A MICROFICHE APPENDIX

Not Applicable

BACKGROUND OF THE INVENTION

1. Technical Field

This invention relates to a power connector assembly and, more particularly, to a power connector assembly with fluorescent markings for assisting to guide a power cord plug into a power outlet.

2. Prior Art

Electrical sockets and plugs are commonly used for joining an electrical appliance or circuit with an electrical outlet such as the common two wire outlet used in the United States for connecting to the 110 volt power connector line. Unfortunately, an electrical power cord having a plug with multiple prongs is often difficult to insert into a power outlet or socket.

Accordingly, it is often difficult for a person to insert an electrical plug correctly on the first try, especially in the dark. Also, persons with deficient eye sight experience difficulties when plugging a power cord into an outlet. This is especially true when plugging an appliance power cord into a power outlet that is hard to reach.

It is well known that a plug only fits into an outlet if the wider prong of the plug lines up with the wider slot in the outlet. Otherwise, the plug cannot be inserted. Since there are two ways to orient the plug, that means that fifty percent of the time, the plug will not go in the first time. This can be frustrating. A person might also worry about damaging the plug if incorrect insertion is attempted.

Prior art attempts to help overcome these shortcomings have been made. For example, U.S. Pat. No. 5,775,935 to Barna discloses a system and method for connecting color-coded cables to a device. In particular, the Barna patent discloses a color-coded system for associating each of a plurality of individual electrical connection parts of a transactional terminal with a particular cable designated for connection with a specific one of the parts. U.S. Pat. No. 6,078,113 to True et al. discloses a power socket with illuminated plug blade slots. Such a patent teaches an illumination mechanism for illuminating the interior area of each plug blade slot. Unfortunately, such a patent requires additional circuitry for supplying power to select color dyes.

Accordingly, there remains a need for providing a power connector assembly that is simple in design while effectively marking a power cord plug having multiple prongs and a power outlet having multiple slots.

BRIEF SUMMARY OF THE INVENTION

In view of the foregoing background, it is therefore an object of the present invention to provide a power connector assembly with fluorescent markings. These and other objects, features, and advantages of the invention are provided by a power connector assembly having a plug or a power cord including a connector end portion integral therewith. The connector end portion includes a plurality of spaced apart prongs extending outwardly therefrom. The connector end portion also has at least one illuminating portion.

A power outlet includes a plurality of slots for receiving the plurality of prongs respectively. At least one of the plurality of slots has an illuminating portion for identifying the at least one slot. The power cord is insertable into the power outlet by guiding the at least one illuminating connector end portion toward the at least one illuminating slot portion. The at least one illuminating connector end portion may be disposed adjacent to the plurality of prongs. Alternately, the at least one illuminating connector end portion may be attached to at least one of the plurality of prongs.

Further, the at least one illuminating connector end portion may have a generally rectangular shape and is preferably attached to an exterior surface of the connector end portion. The at least one illuminating connector end portion is preferably coated with yellow fluorescent paint. Likewise, the at least one illuminating slot portion is preferably coated with yellow fluorescent paint.

The plurality of prongs preferably include a ground prong integral with the at least one illuminating connector end portion. The plurality of slots also preferably include a ground slot integral with the at least one illuminating slot portion so that when the ground prong is aligned with the ground slot, the connector end portion becomes insertable into the power outlet.

BRIEF DESCRIPTION OF THE SEVERAL
VIEWS OF THE DRAWING

The novel features believed to be characteristic of this invention are set forth with particularity in the appended claims. The invention itself, however, both as to its organizational method of operation, together with further objects and advantages thereof, may best be understood by reference to the following description taken in connection with the accompanying drawings in which:

FIG. 1 is a perspective view showing a power connector assembly including a power outlet and a power cord inserted therein, in accordance with the present invention.

FIG. 2 is a perspective view of FIG. 1 with the power cord removed from the associated power outlet.

FIG. 3 is a perspective view showing an alternate embodiment of the illuminating connector end portion illustrated in FIG. 1, and

FIG. 4 is a perspective view showing the illuminating portion is detachable from a power cord.

DETAILED DESCRIPTION OF THE
INVENTION

The present invention will now be described more fully hereinafter with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are pre-

vided so that this application will be thorough and complete, and will fully convey the true scope of the invention to those skilled in the art. Like numbers refer to like elements throughout, and prime and double prime notations are used to indicate similar elements in alternate embodiments.

The assembly of this invention is referred to generally in FIG. 1 by reference numeral 10 and includes a power cord 11 and a power outlet 12. It is noted that the assembly 10 is intended to provide assistance for connecting the power cord 11 of an appliance (not shown) or other conventional device to the power outlet 12. It should be understood that the assembly 10 may be employed with many different types of power outlets and power cords. For example, the present invention may be used with power outlets supplying 110 volts or 220 volts as well as conventional power outlets including two or three slots. Similarly, the assembly 10 may be used with conventional power cords including two or three prongs, as well known in the industry.

As clearly shown in FIG. 1, power cord 11 includes a connector end portion 13 for connecting to power outlet 12. In particular, connector end portion 13 is shown as connected to a lower pair of slots 14 at outlet 12. Now referring to FIG. 2, power cord 11 and the connector end portion 13 are shown has disengaged from the power outlet 12. Power cord 11 includes a plurality of prongs 15, in particular two prongs, extending outwardly from the connector end portion 13. Such prongs 15 are preferably conventional prongs as well known to a person of ordinary skill in the art.

As noted above, power outlet 12 has a plurality of slots 14 with two of such slots located at an upper portion and with two more slots located at a lower portion of the outlet 12, as well known in the art. The slots 14 are sufficiently shaped and sized to receive the pair of prongs 15 extending from the connector end portion 13 and thereby supply electricity to the power cord 11 and an appliance connected thereto. More importantly, one of the prongs 14 is a ground prong and one of the slots 14 is a ground slot. Such a ground slot 14 and a ground prong 15 each include an illuminating portion, as shown at 16 and 17, respectively.

The illuminating portion 17 of prong 15 is integral therewith and preferably includes a coat of paint over an end portion thereof to thereby lead the connector end portion 13 towards the power outlet 12. Likewise, the illuminating portion 17 of the ground slot 14 is coated with fluorescent paint around the periphery thereof for providing a receiving target so that the ground prong 15 can be directed thereto by aligning the illuminating portion 16 therewith. Of course, it is noted that any one of the prongs 15 or any one of the slots 14 may contain an illuminating portion 16, 17, respectively. Furthermore, both prongs 15 and both slots 14 may include an illuminating portion.

Illuminating portions 16, 17 are preferably formed by applying a coat of fluorescent paint or other suitable substance that will glow in the dark or that is easily visible in dark places. The illuminating portions 16, 17 preferably match in color for simplicity. Of course, the size of each illuminating portion 16, 17 may vary. For example, illuminating portion 16 of prong 15 may cover a major portion of the prongs rather than only a minor portion of the prong 15. Likewise, the illuminating portion 17 of the slots 14 may cover a larger portion of the perimeter thereof for providing better visibility in the dark.

Now referring to FIG. 3, an alternate embodiment of the present invention is shown. In particular, the power cord 11' includes a connector end portion 13' that has an illuminating portion 16' attached to an exterior surface thereof. Notably, the illuminating portion 16' is attached to the plurality of

prongs 15, which extends from the connector end portion 13. The illuminating portion 16' has a generally rectangular shape and extends outwardly from a side portion of the connector end portion 13. Such an illuminating portion 16' helps guide the connector end prongs 15 into the associated slots 14 of power outlet 12. Of course, the illuminating portion 16' may be removably attached to connector end portion 13 via a conventional fastener such as an adhesive material or Velcro, as perhaps best shown in FIG. 4. Advantageously, the illuminating portion 16' may be connected to existing power cords as an after market device.

In operation, as in the previous embodiment, the connector end portion 13 should be moved toward power outlet 12 in such a manner so the illuminating portion 16' becomes generally aligned with the illuminating portion 17 of slot 14. This helps the user insert the ground prong into the corresponding ground slot. Of course, the illuminating portion 16' may have different shapes from the particular rectangular shape as shown in FIG. 3. For example, an arrow may be painted on the connector end portion 13, which points parallel to the direction of prongs 15 extending outwardly toward slots 14. In addition, the illuminating portion 16' may have a contoured shape for providing a comfortable grip while inserting the connector end portion 13 into a power outlet 12.

While the invention has been described with respect to certain specific embodiments, it will be appreciated that many modifications and changes may be made by those skilled in the art without departing from the spirit of the invention. It is intended, therefore, by the appended claims to cover all such modifications and changes as fall within the true spirit and scope of the invention.

What is claimed is new and what is desired to secure by Letters Patent of the

1. A power connector assembly comprising:

a power cord including a connector end portion integral therewith, said connector end portion including a plurality of spaced apart prongs extending outwardly therefrom, said connector end portion having at least one illuminating portion; and

a power outlet including a plurality of slots for receiving said plurality of prongs respectively, at least one of said plurality of slots having an illuminating portion for identifying said at least one slot;

said power cord being insertable into said power outlet by guiding said at least one illuminating connector end portion toward said at least one illuminating slot portion;

wherein said at least one illuminating connector end portion is attached to at least one of said plurality of prongs;

2. The power connector assembly of claim 1, wherein said at least one illuminating connector end portion is disposed adjacent to said plurality of prongs;

3. The power connector assembly of claim 1, wherein said at least one illuminating connector end portion has a generally rectangular shape and is attached to an exterior surface of said connector end portion;

4. The power connector assembly of claim 1, wherein said at least one illuminating connector end portion is coated with fluorescent paint;

5. The power connector assembly of claim 4, wherein said fluorescent paint is yellow;

6. The power connector assembly of claim 1, wherein said at least one illuminating slot portion is coated with fluorescent paint.

7. The power connector assembly of claim 6, wherein said fluorescent paint is yellow.

8. The power connector assembly of claim 1, wherein said plurality of prongs includes a ground prong integral with said at least one illuminating connector end portion, said plurality of slots includes a ground slot integral with said at least one illuminating slot portion so that when said ground prong is aligned with said ground slot the connector end portion becomes insertable into the power outlet.

9. A power connector assembly comprising:

a power cord including a connector end portion integral therewith, said connector end portion including a plurality of spaced apart prongs extending outwardly therefrom, said connector end portion having at least one illuminating portion;

a power outlet including a plurality of slots for receiving said plurality of prongs respectively, at least one of said plurality of slots having an illuminating portion for identifying said at least one slot, said at least one illuminating slot portion is coated with fluorescent paint;

said power cord being insertable into said power outlet by guiding said at least one illuminating connector end portion toward said at least one illuminating slot portion.

wherein said at least one illuminating connector end portion is attached to at least one of said plurality of prongs.

10. The power connector assembly of claim 9, wherein said at least one illuminating connector end portion is disposed adjacent to said plurality of prongs.

11. The power connector assembly of claim 9, wherein said at least one illuminating connector end portion has a generally rectangular shape and is attached to an exterior surface of said connector end portion.

12. The power connector assembly of claim 9, wherein said at least one illuminating connector end portion includes fluorescent paint.

13. The power connector assembly of claim 12, wherein said fluorescent paint is yellow.

14. The power connector assembly of claim 9, wherein said fluorescent paint is yellow.

15. The power connector assembly of claim 9, wherein said plurality of prongs includes a ground prong integral with said at least one illuminating connector end portion, said plurality of slots includes a ground slot integral with said at least one illuminating slot portion so that when said ground prong is aligned with said ground slot the connector end portion becomes insertable into the power outlet.

16. The power connector assembly of claim 9, further comprising a fastener attached to said at least one illuminating portion so that same can be removably attached to said connector end portion.

17. The power connector assembly of claim 16, wherein said fastener is an adhesive material.

18. The power connector assembly of claim 16, wherein said fastener is Velcro.